U.S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
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OFFICE NOTE 231

Specification of Parameter Fields in the Spectral Codes

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This Office Note describes the use of a PRMFLD in the execute card for the main spectral forecast and post codes.

Users are urged to exercise great caution in specifying the PRMFLD numbers and to avoid unintentional writing into associated data sets such as the fixed fields, Normal modes file, etc.

Parm field for SMFNKG

Num(j)

j = 1 tau-1 input sigma coefs.

j = 2 tau input sigma coefs.

3 tau-1 output sigma coefs.

4 tau output sigma coefs + precip.

5 01 for normal mode initialization
00 otherwise

6 01 for centered time step integration
00 for backward time step integration

7 Number of time steps

(8) Number of times 7 is done

9 Diffusion coef = Num(9)*10**Num(10)

10

11 = 1 one data set of normal modes
= 0 several data sets (not used in operations)

12 FT number of normal mode file

13 = 1 to write initialized sigma coefs.

14 FT number of initialized sigma coefs. file

15 = 0 for large-scale cycle = 1 for Final

16 FT number of sea surface temp.

17 FT number if (8) is two (not used in operations)

18 Number of vertical modes used in the nonlinear normal modes initialization

19 Number of iterations in the normal modes initialization

Parm Field for SMPNKG, SMPNKH

Num(j)

j = 1 QPF control, = 1 for F00 file, = 0 other files

j = 2 R/A file control (see below) use with care

j = 3 Not used.

j = 4 FT number of file containing switches to select R/A output

j = 5 Number of sigma files to be processed

For J > 5 parm field contains information concerning:

a) Input FT number of sigma files

b) Output FT number of pressure files

c) Switches to write output pressure files

Example:

Processing 3 sigma files residing in FT10 FT11 FT12. It is desired to save press. coefficients resulting from processing FT10 and FT12 on FT20 and FT21.

NUM (5) = 3 Processing three sigma files

NUM (6) = 10 FT number of first sigma file

NUM (7) = 11 FT number of second sigma file

NUM (8) = 12 FT number of third sigma file

NUM (9) = 20 FT number of press. file generated from first sigma file

NUM (10) = not used. (Would be used for press. coefs. if NUM (14) $\neq$ 0)

NUM (12) = 21 FT number of press. file generated from third sigma file

NUM (13) = 1 Switch to write FT20

NUM (14) = 0 Skips writing press. coefs. resulting from FT11

NUM (15) = 1 Switch to write FT21

NUM (2) = 2 Use when more records are to be added to an existing file

NUM (2) = 3 R/A file(s) are not used

NUM (2) = 1 Pre-format R/A file and write data as required by post codes

Parm Field for SMFNKH

Num(j)

j = 1 tau-1 input sigma coeff.

j = 2 tau input sigma coeff.

3 tau-1 output sigma coeff.

4 Number of time steps

5 FT number (segment = 1) see num(14)

6 2

7 3

8 4

9 = 1 for normal mode initialization
= 0 No normal mode initialization

10 FT for normal mode initialization file

11 = 1 for 1 file of modes

12 FT of sea surface temperature

13 Not used

14 Number of forecast segments with Num(4) time steps each.